Environmental Resources Management

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6 August 2010
Reference: 0104024

Mr. Gennady Shteynberg
Connecticut Department of Environmental Protection
Bureau of Water Protection and Land Reuse
Remediation Division
79 Elm Street
Hartford, CT 06106
&
Ms. Stephanie Carr
RCRA Corrective Action Section
U.S. Environmental Protection Agency – Region I
5 Post Office Square – Suite 100
Boston, MA 02109-3912

Re: Supplemental Soil Sampling Activities Report
Former Framatome Property
Lot 1 – 80 Wampus Lane, Milford, Connecticut

Dear Mr. Shteynberg and Ms. Carr:

On behalf of JMG Milford Realty, LLC (JMG), Environmental Resources Management (ERM) is pleased to submit this *Supplemental Soil Sampling Activities Report* relating to the former Framatome facility, located at 80 Wampus Lane in Milford, Connecticut (the "Site"). The Site location is shown in Figure 1. The purpose of this report is to summarize the results of the supplemental Lot 1 soil sampling and highlight the data generated relative to the applicable numerical soil criteria established under the 1996 Remediation Standard Regulations (RSRs).

BACKGROUND

In response to comments from the Connecticut Department of Environmental Protection (DEP) and the Environmental Protection Agency (EPA) regarding additional soil investigation work required to satisfy the RSRs, ERM generated a formal Work Plan in January 2010. The Work Plan was accepted, as documented in the March 11, 2010 joint-agency letter issued to JMG. The purpose of the soil sampling portion of the approved Work Plan was to confirm the RSR compliance status for soil in AOC 2 and AOC 3. Figure 2, attached, shows the Site and the

location of these AOCs. The additional samples are designed to supplement previous soil data collected at the Site in accordance with the requirements of the Remediation Standard Regulations (RSRs).

SCOPE OF WORK

On 21 May 2010 ERM collected soil samples as described in the approved Work Plan. ERM determined the location of the previously collected soil samples using field notes, measurements and scaled Site Plans previously generated during the project.

AOC-2: Former Sludge Landfill

ERM advanced two shallow soil borings via hand auger and collected two additional soil samples in the location of previous boring location TB-15. A previous soil sample at a reported depth of 4-6 feet contained levels of total petroleum-hydrocarbons in excess of the applicable RSR numerical criteria. New boring locations, TB-15-Sup A and TB-Sup B are shown on Figure 3. One soil sample was collected from each of the two new boring locations. The actual depth of these samples was determined in the field, as the grade of this portion of the site has been lowered since the prior sampling. The borings extended through the imported fill material emplaced after excavation work conducted in this portion of the Site by ERM. The samples were collected from the upper native soil immediately below the fill material. The samples were analyzed for TPH using the CT ETPH Method, total chromium using Method 6010 and hexavalent chromium using Method 7196.

AOC-3: Former Waste Lines

Post-Excavation Sample WLD PE-3. Sample WLD PE-3 originated from the far northern end to waste line D, 60 feet south of the former discharge point to the drainage swale (see Figure 4). The sample originated from a depth of 3.5 feet (bottom of the pipe). ERM re-sampled the soil in this area to evaluate whether the concentration of TPH (4,000 mg/kg in 2001) has dropped below the I/C DEC of 2,500 mg/kg over the past eight years. One soil boring was advanced via hand auger, from the same location as the original soil sample. One soil sample was collected from native soils at the same depth as the prior sample (3.5 feet below grade) and analyzed for TPH via the CT ETPH Method.

Post-Excavation Samples WLA PE-2 and WLB PE-12. Sample WLA PE-2 and WLB PE-12 were collected by ERM to determine the condition of the soil immediately below the removed waste lines at a depth of 4 feet below the ground surface (see Figure 4). ERM re-collected these two soil samples from native soils (below the clean fill) using a hand auger and analyzed them for total chromium using Method 6010 and hexavalent chromium using Method 7196.

RESULTS

The laboratory did not report detectable levels of ETPH or hexavalent chromium in any of the samples submitted. Total chromium was detected in varying amounts at levels below the applicable numerical RSR criteria. Soil sample results are provided as Table 1 and are attached to this report.

CONCLUSIONS & RECOMMENDATIONS

Based on the results of this supplemental soil sampling effort, the soil within the AOCs resident on Lot 1 are in compliance with the applicable numerical RSR criteria. Further, the remediation work performed at the Site between 2000 and 2007 was successful in removing soil-borne sources of groundwater contamination at the Site. The overall decrease in metals and chlorinated volatile organic compound (VOCs) levels in groundwater on Lot 1 since remedial activities were initiated in 1997 is further evidence that the historical soil borne sources of groundwater impacts have been successfully remediated.

At this time, ERM recommends that the groundwater monitoring program for Lot 1 summarized in the Work Plan be initiated starting in September 2010. The goals of the monitoring, as discussed in the Work Plan are:

Confirm the continued reduction of CVOCs and Site-specific metals concentrations in groundwater on Lot 1;

Evaluate potential Environmental Land Use Restrictions (ELUR) for Lot 1 related to CVOCs in groundwater (no build ELUR);

Confirm that Site-specific metals and CVOCs in groundwater are not impacting Stubby Plain Brook at levels that exceed the Surface Water Protection Criteria (SWPC); and

Evaluate the CVOCs and metals present in groundwater for potential ecological impacts to the nearby wetland areas to the north.

These goals must be met to allow for closure of the Site under the RSRs. Please call if you have any questions.

Regards,

James L. Pfeifer, LEP
Senior Project Manager

Enclosures

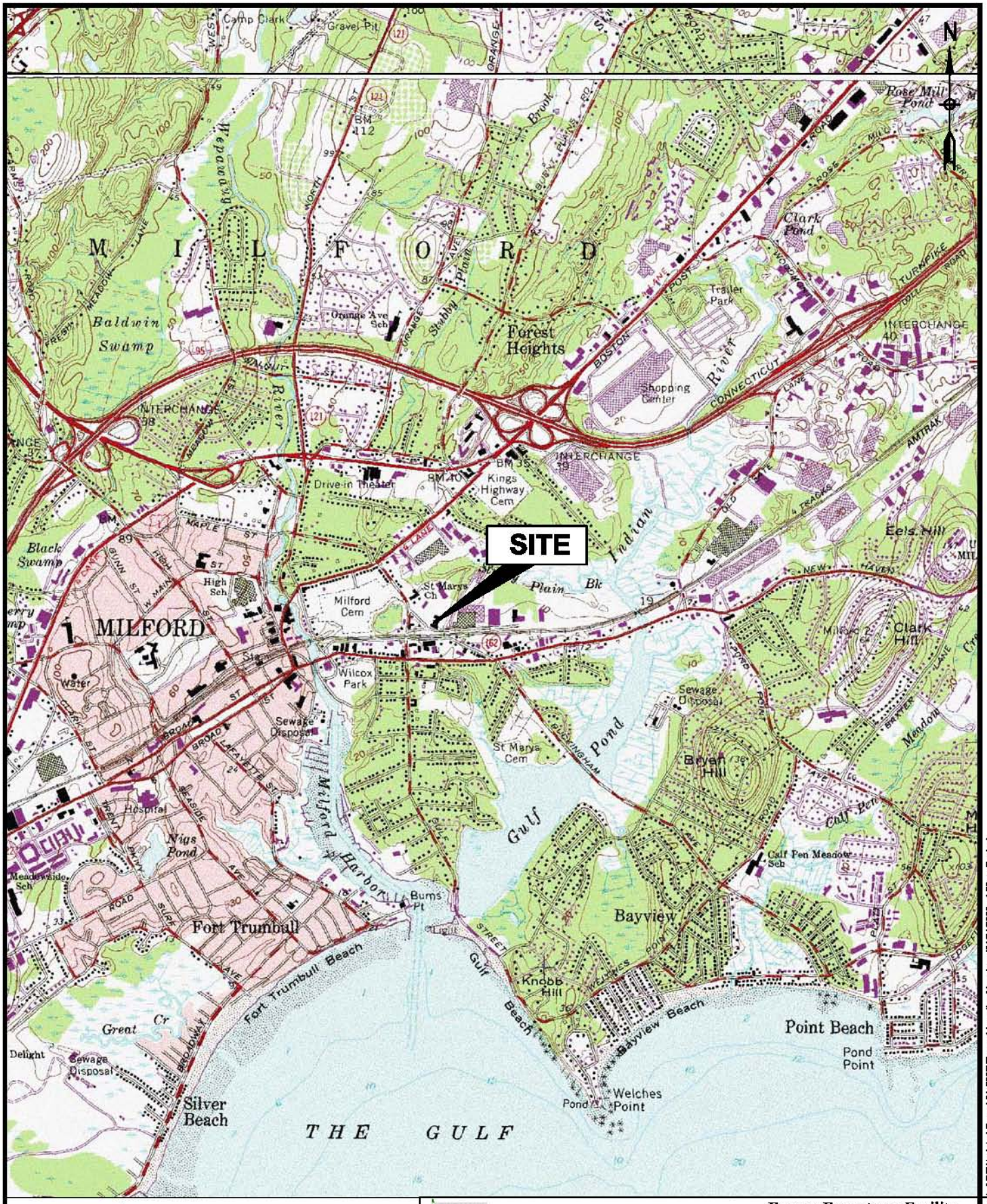
TABLE 1
SUPPLEMENTAL SOIL DATA

Table 1
Supplemental Soil Data
Former Framatome Facility
Lots 1 and 2 - 80 Wampus Lane
Milford, CT

Sample Location				WLAPE-2-Sup	WLAPE-3-Sup	WLAPE-12-Sup	TB-15-Sup A	TB-15-Sup B
Laboratory ID	GB PMC	I/C DEC	Res DEC	SB12750-01	SB12750-02	SB12750-03	SB12750-04	SB12750-05
Sample Date				5/21/2010	5/21/2010	5/21/2010	5/21/2010	5/21/2010
SM2540 G Mod. (%)								
% Solids				79.2	87.1	86.8	76	76
CT ETPH (mg/kg)								
Total Petroleum Hydrocarbons	2500	2500	500	NA	<30.3	NA	<33.1	<33.5
SW846 6010B (mg/kg)								
Chromium	NE	NE	NE	11.9	NA	8.14	10.7	5.41
SW3060/7196 (mg/Kg)								
Chromium, Hexavalent	NE	NE	NE	<0.47	NA	<0.47	<0.48	<0.48

GB PMC = Pollutant Mobility Criteria for Soils in a GB Groundwater Area
I/C DEC = Industrial/Commercial Direct Exposure Criteria
RES DEC = Residential Direct Exposure Criteria
NE = Not Established
NA = Not Analyzed

FIGURES



Scale 1:25,000

0.5 km 0 500 m

0.5 mi 0 1,000 ft

ERM
Environmental Resources Management, Inc.

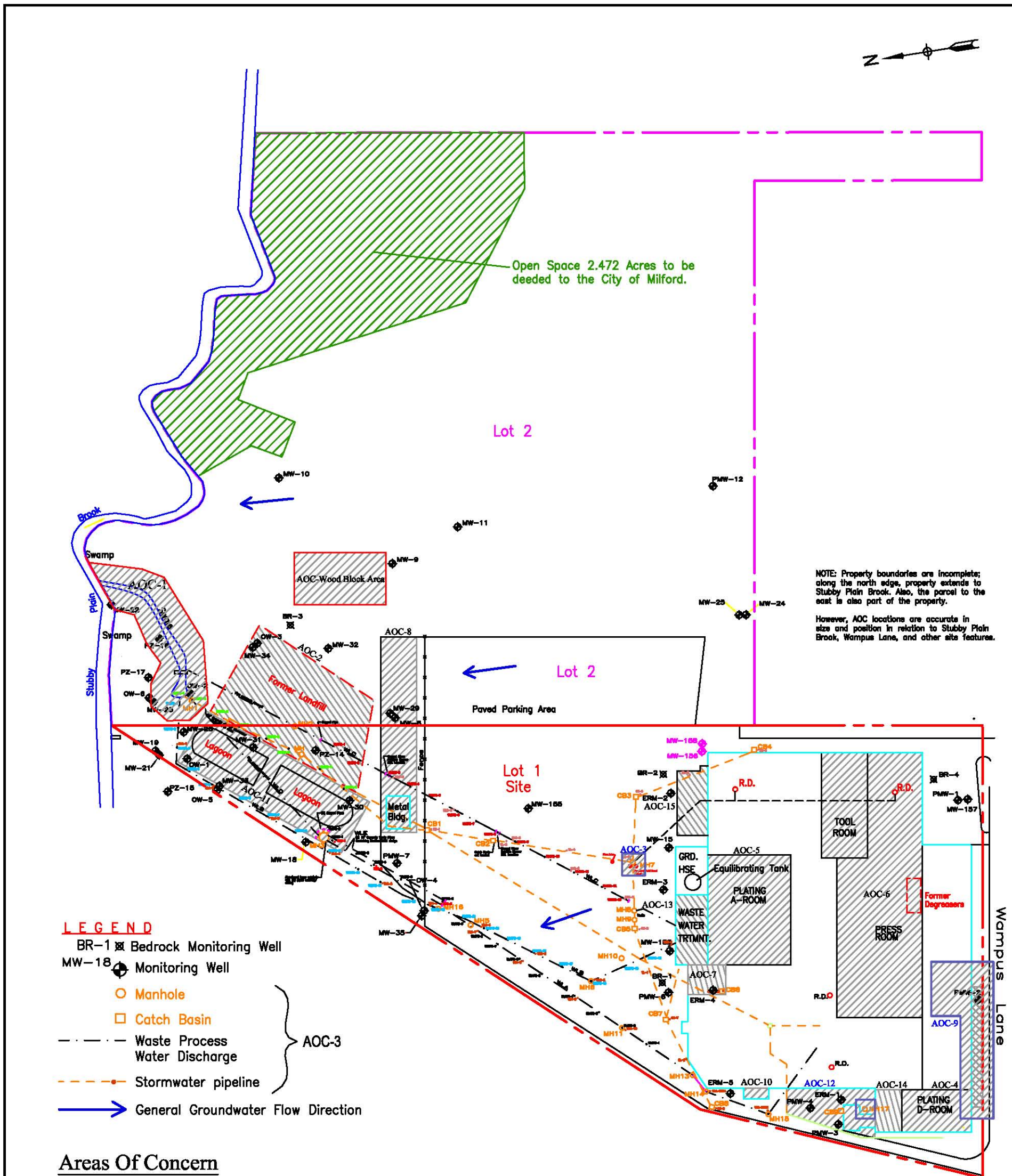
Date: January, 2008
Drawn: M. Mayo
Scale: 1:25,000
Reference Maps: Source CT.gov

Former Framatome Facility
80 Wampus Lane
Milford, Connecticut
Project No.: 0042296

Site Location Map

FIGURE
1

R:\CT Jobs\WampusReport- ADCU\pdsted Report 01-2008\Figure 1 Location Map.dwg (01/24/2008 - 1:50pm Boston)



Areas Of Concern

AOC-1 Swale area
AOC-2 Former sludge landfill
AOC-3 Underground storm and wastewater piping systems
AOC-4 Former "D" Plating Room
AOC-5 Former "A" Plating Room
AOC-6 Former Tool & Press Room
AOC-7 Former 1,000 gallon TCA tank & hazardous waste storage area
AOC-8 Former Hazardous waste storage building and material storage area
AOC-9 Fuel oil USTs
AOC-10 Former MOH sludge storage containers
AOC-11 Closed unlined MOH surface impoundments
AOC-12 Former concrete lined surface impoundments and material storage area
AOC-13 Former aqualogic/lancy wastewater treatment system
AOC-14 Former graver wastewater treatment system
AOC-15 Former materials storage area

Scale (1"=150')
75 0 37.5 75 150 300

ERM
Environmental Resources Management, Inc.
Date: January, 2008
Drawn: M. Mayo
Scale: 1" = 300'
Reference Maps: Information taken from site reconnaisance

Former Framatome Facility
80 Wampus Lane
Milford, Connecticut
Project No.: 0042296
Area of Concern Locations
Lot 1 & 2

FIGURE
2

G:\Projects\0042296- Wampus\openspace.dwg

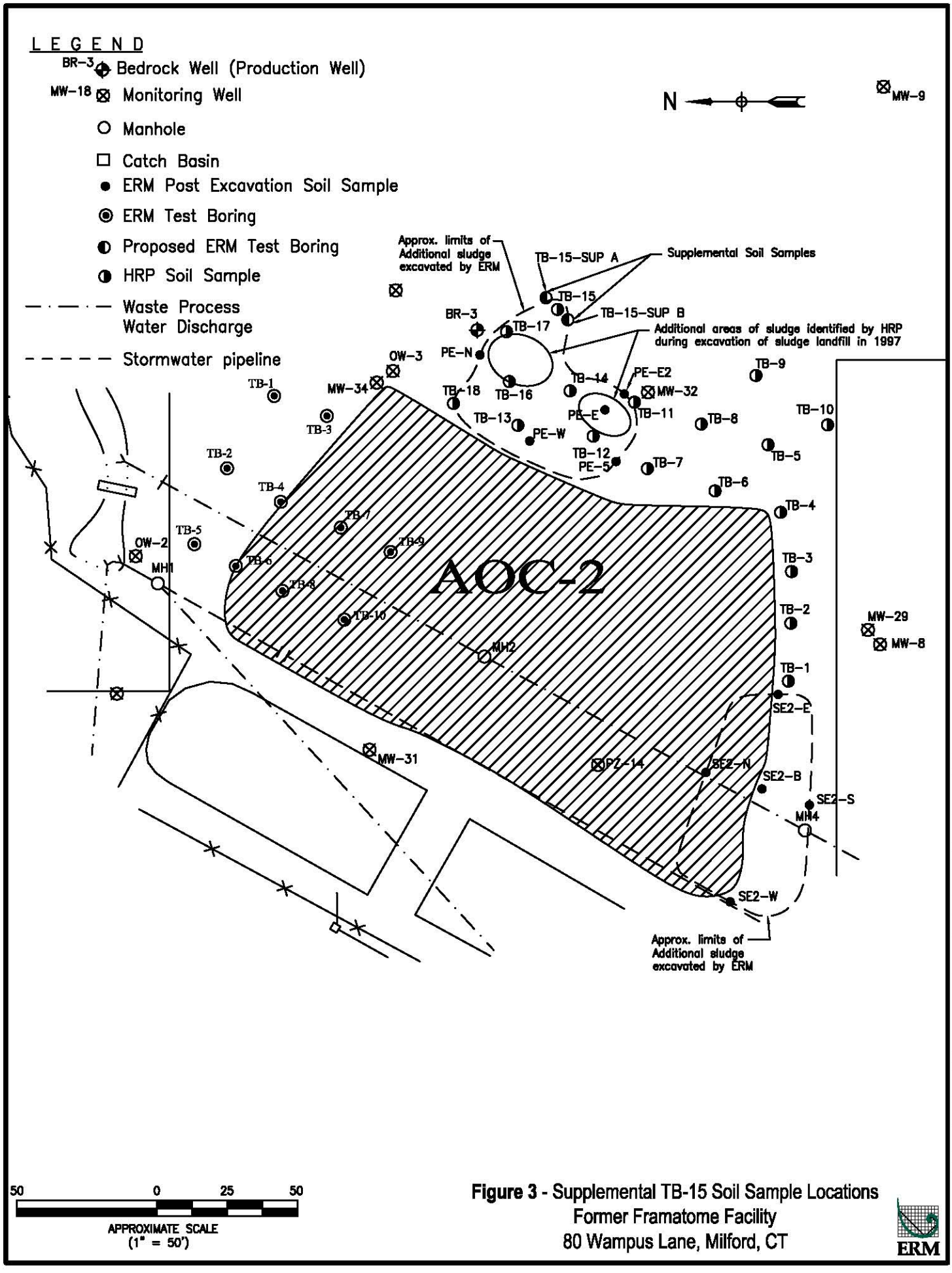


Figure 3 - Supplemental TB-15 Soil Sample Locations
Former Framatome Facility
80 Wampus Lane, Milford, CT

ERM

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Former Landfill

Lot 2
Paved Parking Area

Lot 1

Fence

Lagoon

Lagoon

Metal Bldg.

R.D.

GRD. HSE

Equilibrating Tank

WASTE WATER TRTMNT.

PLATING A-ROOM

N

PZ-17
OW-2
OW-6
MW-23
MH1
MW-20
MW-19
MW-21
OW-1
MW-33
PZ-15
OW-5
MW-31
MH
PZ-14
MH2
Capped Pipe
MW-29
MW-8
MW-30
MW-18
MH3
(4) Capped Pipes
WLE
(2) 18" Concrete Waste Pipes Containing Residual MOH sludge
Abandoned large manhole with (6) pipes entering/exiting
PMW-7
OW-4
MW-35
MH16
MH5
MW-155
CB1
CB2
Catch Basin not located
Capped Pipes Possible Former M.H. Location
MW-158
MW-156
CB4
BR-2
CB3
ERM-2
MW-15
First Joint MH-7
MH7
Proposed Additional Samples
ERM-3
MH8
MH9
Vaults
CB5
MW-157
MH10
MH6
BR-1
PMW-6
CB6
ERM-4
CB7
MH11

WLA
WLB
WLC
WLD
WLE

LEGEND

BR-1 Bedrock Well (Production Well)
MW-1S Monitoring Well
Manhole
Catch Basin
Soil Sample
Waste Process Water Discharge
Stormwater Pipeline
Property Line

AOC-3

UNDERGROUND STORM AND WASTEWATER PIPING SYSTEMS

Scale (1"=50')
25 0 25 50 100

Figure 4 - Supplemental Soil Sample Locations - Lot 1
Former Framatone Facility
80 Wampus Lane, Milford, CT

ERM

G:\Clients\Wampus Milford Associates LLC\0104024-Wampus\Figures\CAD\Annual Report figs.dwg (07/08/2010 - 1:45pm Hartford)

ATTACHMENT A
LABORATORY CERTIFICATES OF ANALYSIS

Report Date:
04-Jun-10 10:14

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Environmental Resources Management
77 Hartland St.; Suite 300
East Hartford, CT 06108
Attn: Jim Pfeifer

Project: Wampus - Milford, CT
Project #: 0104024

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SB12750-01	WLAPE-2-Sup	Soil	21-May-10 13:20	24-May-10 17:00
SB12750-02	WLAPE-3-Sup	Soil	21-May-10 13:45	24-May-10 17:00
SB12750-03	WLAPE-12-Sup	Soil	21-May-10 15:25	24-May-10 17:00
SB12750-04	TB-15-Sup A	Soil	21-May-10 14:55	24-May-10 17:00
SB12750-05	TB-15-Sup B	Soil	21-May-10 15:05	24-May-10 17:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes.
Please note that this report contains 11 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

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Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The samples were received 3.0 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

Required site-specific Matrix Spike/Matrix Spike Duplicate (MS/MSD) must be requested by the client and sufficient sample must be submitted for the additional analyses. Samples submitted with insufficient volume/weight will not be analyzed for site specific MS/MSD, however a batch MS/MSD may be analyzed from a non-site specific sample.

CTDEP has published a list of analytical methods which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of decisions being made utilizing the Reasonable Confidence Protocol (RCP). "Reasonable Confidence" can be established only for those methods published by the CTDEP in the RCP guidelines. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

The CTDEP RCP requests that "all non-detects and all results below the reporting limit are reported as ND (Not Detected at the Specified Reporting Limit)". All non-detects and all results below the reporting limit are reported as "BRL" (Below the Reporting Limit) in this report.

If no reporting limits were specified or referenced on the chain-of-custody the laboratory's practical quantitation limits were applied.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 6010B

Duplicates:

1011475-DUP1 *Source: SB12750-01*

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Chromium

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
WLAPE-2-Sup SB12750-01	0104024	Soil	21-May-10 13:20	24-May-10

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Total Metals by EPA 6000/7000 Series Methods												
7440-47-3	Chromium	11.9		mg/kg dry	1.12	1	SW846 6010B	01-Jun-10	02-Jun-10	TBG	1011475	X
General Chemistry Parameters												
	% Solids	79.2		%		1	SM2540 G Mod.	26-May-10	26-May-10	GMA	1011182	
Subcontracted Analyses												
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*												
18540-29-9	Chromium, Hexavalent	BRL		mg/Kg	0.47	1	SW3060/7196	01-Jun-10 15:05	01-Jun-10 15:05	CT007	SW3060A	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
WLAPE-3-Sup	0104024	Soil	21-May-10 13:45	24-May-10
SB12750-02				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Extractable Petroleum Hydrocarbons												
Extractable Total Petroleum Hydrocarbons Prepared by method SW846 3545A												
8006-61-9	Gasoline	BRL		mg/kg dry	30.3	1	+CT ETPH	27-May-10	27-May-10	SHM	1011203	
68476-30-2	Fuel Oil #2	BRL		mg/kg dry	30.3	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	BRL		mg/kg dry	30.3	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	BRL		mg/kg dry	30.3	1	"	"	"	"	"	
M09800000	Motor Oil	BRL		mg/kg dry	30.3	1	"	"	"	"	"	
J00100000	Aviation Fuel	BRL		mg/kg dry	30.3	1	"	"	"	"	"	
	Unidentified	BRL		mg/kg dry	30.3	1	"	"	"	"	"	
	Other Oil	BRL		mg/kg dry	30.3	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	BRL		mg/kg dry	30.3	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	BRL		mg/kg dry	30.3	1	"	"	"	"	"	
Surrogate recoveries:												
3386-33-2	*1-Chlorooctadecane*	*107*			*50-150 %*		"	"	"	"	"	
General Chemistry Parameters												
	% Solids	87.1		%		1	SM2540 G Mod.	26-May-10	26-May-10	GMA	1011182	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
WLAPE-12-Sup SB12750-03	0104024	Soil	21-May-10 15:25	24-May-10

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Total Metals by EPA 6000/7000 Series Methods												
7440-47-3	Chromium	8.14		mg/kg dry	1.08	1	SW846 6010B	01-Jun-10	02-Jun-10	TBG	1011475	X
General Chemistry Parameters												
	% Solids	86.8		%		1	SM2540 G Mod.	26-May-10	26-May-10	GMA	1011182	
Subcontracted Analyses												
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*												
18540-29-9	Chromium, Hexavalent	BRL		mg/Kg	0.47	1	SW3060/7196	01-Jun-10 15:05	01-Jun-10 15:05	CT007	SW3060A	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TB-15-Sup A	0104024	Soil	21-May-10 14:55	24-May-10
SB12750-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons												
Extractable Total Petroleum Hydrocarbons Prepared by method SW846 3545A												
8006-61-9	Gasoline	BRL		mg/kg dry	33.1	1	+CT ETPH	27-May-10	27-May-10	SHM	1011203	
68476-30-2	Fuel Oil #2	BRL		mg/kg dry	33.1	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	BRL		mg/kg dry	33.1	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	BRL		mg/kg dry	33.1	1	"	"	"	"	"	
M09800000	Motor Oil	BRL		mg/kg dry	33.1	1	"	"	"	"	"	
J00100000	Aviation Fuel	BRL		mg/kg dry	33.1	1	"	"	"	"	"	
	Unidentified	BRL		mg/kg dry	33.1	1	"	"	"	"	"	
	Other Oil	BRL		mg/kg dry	33.1	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	BRL		mg/kg dry	33.1	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	BRL		mg/kg dry	33.1	1	"	"	"	"	"	
Surrogate recoveries:												
3386-33-2	*1-Chlorooctadecane*	*106*			*50-150 %*		"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods												
7440-47-3	Chromium	10.7		mg/kg dry	1.16	1	SW846 6010B	01-Jun-10	02-Jun-10	TBG	1011475	X
General Chemistry Parameters												
	% Solids	76.0		%		1	SM2540 G Mod.	26-May-10	26-May-10	GMA	1011182	
Subcontracted Analyses												
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*												
18540-29-9	Chromium, Hexavalent	BRL		mg/Kg	0.48	1	SW3060/7196	01-Jun-10 15:05	01-Jun-10 15:05	CT007	SW3060A	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
TB-15-Sup B	0104024	Soil	21-May-10 15:05	24-May-10
SB12750-05				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons												
Extractable Total Petroleum Hydrocarbons Prepared by method SW846 3545A												
8006-61-9	Gasoline	BRL		mg/kg dry	33.5	1	+CT ETPH	27-May-10	27-May-10	SHM	1011203	
68476-30-2	Fuel Oil #2	BRL		mg/kg dry	33.5	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	BRL		mg/kg dry	33.5	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	BRL		mg/kg dry	33.5	1	"	"	"	"	"	
M09800000	Motor Oil	BRL		mg/kg dry	33.5	1	"	"	"	"	"	
J00100000	Aviation Fuel	BRL		mg/kg dry	33.5	1	"	"	"	"	"	
	Unidentified	BRL		mg/kg dry	33.5	1	"	"	"	"	"	
	Other Oil	BRL		mg/kg dry	33.5	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	BRL		mg/kg dry	33.5	1	"	"	"	"	"	
	C9-C36 Aliphatic Hydrocarbons	BRL		mg/kg dry	33.5	1	"	"	"	"	"	
Surrogate recoveries:												
3386-33-2	*1-Chlorooctadecane*	*118*			*50-150 %*		"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods												
7440-47-3	Chromium	5.41		mg/kg dry	1.18	1	SW846 6010B	01-Jun-10	02-Jun-10	TBG	1011475	X
General Chemistry Parameters												
	% Solids	76.0		%		1	SM2540 G Mod.	26-May-10	26-May-10	GMA	1011182	
Subcontracted Analyses												
*Analysis performed by Phoenix Environmental Labs, Inc. * - CT007*												
18540-29-9	Chromium, Hexavalent	BRL		mg/Kg	0.48	1	SW3060/7196	01-Jun-10 15:05	01-Jun-10 15:05	CT007	SW3060A	

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1011203 - SW846 3545A										
Blank (1011203-BLK1)					Prepared & Analyzed: 27-May-10					
Gasoline	BRL		mg/kg wet	13.3						
Fuel Oil #2	BRL		mg/kg wet	13.3						
Fuel Oil #4	BRL		mg/kg wet	13.3						
Fuel Oil #6	BRL		mg/kg wet	13.3						
Motor Oil	BRL		mg/kg wet	13.3						
Aviation Fuel	BRL		mg/kg wet	13.3						
Unidentified	BRL		mg/kg wet	13.3						
Other Oil	BRL		mg/kg wet	13.3						
Total Petroleum Hydrocarbons	BRL		mg/kg wet	13.3						
C9-C36 Aliphatic Hydrocarbons	BRL		mg/kg wet	13.3						
Surrogate: 1-Chlorooctadecane	*3.24*		mg/kg wet		*3.33*		*97*	*50-150*		
LCS (1011203-BS1)					Prepared & Analyzed: 27-May-10					
C9-C36 Aliphatic Hydrocarbons	101		mg/kg wet	13.3	93.3		108	60-120		
Surrogate: 1-Chlorooctadecane	*2.85*		mg/kg wet		*3.33*		*86*	*50-150*		
Duplicate (1011203-DUP1)			**Source: SB12750-04**		Prepared & Analyzed: 27-May-10					
Gasoline	BRL		mg/kg dry	33.1		BRL				50
Fuel Oil #2	BRL		mg/kg dry	33.1		BRL				50
Fuel Oil #4	BRL		mg/kg dry	33.1		BRL				50
Fuel Oil #6	BRL		mg/kg dry	33.1		BRL				50
Motor Oil	BRL		mg/kg dry	33.1		BRL				50
Aviation Fuel	BRL		mg/kg dry	33.1		BRL				50
Unidentified	BRL		mg/kg dry	33.1		BRL				50
Other Oil	BRL		mg/kg dry	33.1		BRL				50
Total Petroleum Hydrocarbons	BRL		mg/kg dry	33.1		BRL				50
C9-C36 Aliphatic Hydrocarbons	BRL		mg/kg dry	33.1		BRL				50
Surrogate: 1-Chlorooctadecane	*4.49*		mg/kg dry		*4.15*		*108*	*50-150*		
Matrix Spike (1011203-MS1)			**Source: SB12750-04**		Prepared & Analyzed: 27-May-10					
C9-C36 Aliphatic Hydrocarbons	118		mg/kg dry	16.7	118	BRL	100	50-150		
Surrogate: 1-Chlorooctadecane	*3.40*		mg/kg dry		*4.20*		*81*	*50-150*		
Matrix Spike Dup (1011203-MSD1)			**Source: SB12750-04**		Prepared & Analyzed: 27-May-10					
C9-C36 Aliphatic Hydrocarbons	127		mg/kg dry	17.4	122	BRL	104	50-150	4	30
Surrogate: 1-Chlorooctadecane	*3.50*		mg/kg dry		*4.37*		*80*	*50-150*		

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1011475 - SW846 3050B										
Blank (1011475-BLK1)					Prepared: 01-Jun-10 Analyzed: 02-Jun-10					
Chromium	BRL		mg/kg wet	0.965						
Duplicate (1011475-DUP1)			**Source: SB12750-01**		Prepared: 01-Jun-10 Analyzed: 02-Jun-10					
Chromium	18.2	QR6	mg/kg dry	1.15		11.9			42	20
Reference (1011475-SRM1)					Prepared: 01-Jun-10 Analyzed: 02-Jun-10					
Chromium	42.5		mg/kg wet	1.00	41.7		102	79.5-120.3		
Reference (1011475-SRM2)					Prepared: 01-Jun-10 Analyzed: 02-Jun-10					
Chromium	43.4		mg/kg wet	1.00	40.9		106	79.5-120.3		

Notes and Definitions

QR6	The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Interpretation of Total Petroleum Hydrocarbon Report

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from analyses of various petroleum products. Possible match categories are as follows:

Gasoline - includes regular, unleaded, premium, etc.
Fuel Oil #2 - includes home heating oil, #2 fuel oil, and diesel
Fuel Oil #4 - includes #4 fuel oil
Fuel Oil #6 - includes #6 fuel oil and bunker "C" oil
Motor Oil - includes virgin and waste automobile oil
Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha
Aviation Fuel - includes kerosene, Jet A and JP-4
Other Oil - includes lubricating and cutting oil, and silicon oil

At times, the unidentified petroleum product is quantified using a calibration that most closely approximates the distribution of compounds in the sample. When this occurs, the result is qualified as *TPH (Calculated as).

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Leja

Reasonable Confidence Protocols
Laboratory Analysis
QA/QC Certification Form

Laboratory Name: Spectrum Analytical, Inc.

Client: Environmental Resources Management - Hartford, CT

Project Location: Wampus - Milford, CT

Project Number: 0104024

Sampling Date(s):
5/21/2010

Laboratory Sample ID(s):
SB12750-01 through SB12750-05

RCP Methods Used:

+CT ETPH

SW3060/7196

SW846 6010B

SW846 7196A

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	✓ Yes No
1A	Were the method specified preservation and holding time requirements met?	✓ Yes No
1B	***VPH and EPH methods only***: Was the VPH or EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	Yes No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	✓ Yes No
3	Were samples received at an appropriate temperature?	✓ Yes No
4	Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved?	Yes ✓ No
5	a) Were reporting limits specified or referenced on the chain-of-custody? * b) Were these reporting limits met? *Exceptions are defined by qualifiers*	Yes ✓ No Yes No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes ✓ No
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	✓ Yes No

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A, or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence."

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for obtaining the information contained in this analytical report, such information is accurate and complete.

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director
Date: 6/4/2010

Evaluate Continuing Calibration Report

Data File : O:\Jan2010\SVOC\HPS16\TPH16010510\CCV0104.D Vial: 27
Acq On : 05 Jan 2010 8:24 pm Operator: SHM
Sample : CCV0104 Inst : HP G1530A
Misc : 100PPB Aliphatic ICV Multiplr: 1.00
Quant Time: Jan 06 11:58:24 2010
Quant Results File: T160106J.RES

Quant Method : C:\msdchem\1\METHODS\T160106J.M
Quant Title : TPH8100 CT-ETPH ME-DRO ALIPHATICS METHOD
QLast Update : Wed Jan 06 10:47:32 2010
Response via : Initial Calibration
DataAcq Meth:T160106I.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

			Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2	TPH		C9-C36 Aliphatics	1.400	1.160	17.1	128	0.00
8	T		C9-Nonae	100.000	86.226	13.8	116	0.05
9	T		C10-Decane	100.000	86.198	13.8	119	0.05
10	T		C12-Dodecane	100.000	86.263	13.7	121	0.04
11	T	M	C14-Tetradecane	100.000	86.246	13.8	122	0.04
12	T		C16-Hexadecane	100.000	86.687	13.3	123	0.04
13	T		C18-Octadecane	100.000	86.859	13.1	123	0.04
14	T		C19-Nonadecane	100.000	87.236	12.8	123	0.04
16	S		COD-1ChloroOctadec	10.000	51.715	-417.1#	127	0.04
17	T	M	C20-Eicosane	100.000	94.248	5.8	123	0.04
18	T		C22-Docosane	100.000	89.135	10.9	118	0.04
19	T		C24-Tetracosane	100.000	89.152	10.8	113	0.04
20	T		C26-Hecxacosane	100.000	90.494	9.5	111	0.04
21	T	M	C28-Octacosane	100.000	91.264	8.7	107	0.04
22	T		C30-Triacontane	100.000	91.161	8.8	101	0.05
23	T		C36-Hexatriacontane	100.000	92.736	7.3	101	0.11

Evaluate Continuing Calibration Report - Not Founds

			Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	TPH		Gasoline	5.000	-0.214	104.3#	0	-1.50#
3	TPH		DRO C10-C28	5.000	-0.078	101.6#	0	-3.50#
4	TPH		#2 Fuel	5.000	0.000	100.0#	0	-1.50#
5	TPH		#6 Fuel	5.000	-0.438	108.8#	0	-2.00#
6	TPH		Motor Oil/Other	5.000	-0.337	106.7#	0	-11.00#
7			ALPHATICS COMPOUNDS	100.000	0.000	100.0#	0	0.00
15	S		OTP	-1.000	0.000	0.0	0	-7.15#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\Ma...TPH15052710\CCV0527.D Vial: 4
Signal(s) : FID1A.CH
Acq On : 27 May 2010 9:14 am Operator: SHM
Sample : CCV0527 Inst : HP G1530A
Misc : 100ppb Aliphatic CCV Multiplr: 1.00
Integration File: events.e
Quant Time: May 27 09:37:26 2010
Quant Results File: T150216J.RES

Quant Method : C:\MSDCHEM\1\METHODS\T150216J.M
Quant Title : TPH8100 CT-ETPH ME-DRO ALIPHATICS METHOD
QLast Update : Tue May 18 11:18:08 2010
Response via : Initial Calibration
DataAcq Meth:T150216J.M

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2	TPH	C9-C36 Aliphatics	1.400	1.472	-5.1	102	0.00
8	T	C9-Nonae	100.000	92.496	7.5	89	0.00
9	T	C10-Decane	100.000	91.579	8.4	89	0.00
10	T	C12-Dodecane	100.000	91.235	8.8	88	0.00
11	T M	C14-Tetradecane	100.000	93.631	6.4	91	0.00
12	T	C16-Hexadecane	100.000	94.746	5.3	92	0.00
13	T	C18-Octadecane	100.000	95.920	4.1	93	0.00
14	T	C19-Nonadecane	100.000	96.074	3.9	93	0.00
16	S	COD-1ChloroOctadec	-1.000	41.109	0.0	0	0.00
17	T M	C20-Eicosane	100.000	96.073	3.9	93	0.00
18	T	C22-Docosane	100.000	96.041	4.0	93	0.00
19	T	C24-Tetracosane	100.000	95.383	4.6	92	0.00
20	T	C26-Hecxacosane	100.000	94.955	5.0	92	0.01
21	T M	C28-Octacosane	100.000	94.283	5.7	92	0.03
22	T	C30-Triacontane	100.000	94.262	5.7	91	0.04
23	T	C36-Hexatriacontane	100.000	93.474	6.5	84	0.05

Evaluate Continuing Calibration Report - Not Founds

1	TPH	Gasoline	10.000	-0.287	102.9#	0	-1.50#
3	TPH	DRO (ME) C10-C28	10.000	-0.137	101.4#	0	-3.20#
4	TPH	#2 Fuel	10.000	-0.189	101.9#	0	-1.50#
5	TPH	#6 Fuel	10.000	-0.238	102.4#	0	-1.50#
6	TPH	Motor Oil/Other	10.000	-0.525	105.3#	0	-5.50#
7		ALPHATICS COMPOUNDS	-1.000	0.000	0.0	0	0.00
15	S	OTP	-1.000	0.000	0.0	0	-7.33#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\Ma...PH15052710\MC150527.D Vial: 23
Signal(s) : FID1A.CH
Acq On : 27 May 2010 8:05 pm Operator: SHM
Sample : MC150527 Inst : HP G1530A
Misc : 100ppb Aliphatic CCV Multiplr: 1.00
Integration File: events.e
Quant Time: May 28 08:46:52 2010
Quant Results File: T150216J.RES

Quant Method : C:\MSDCHEM\1\METHODS\T150216J.M
Quant Title : TPH8100 CT-ETPH ME-DRO ALIPHATICS METHOD
QLast Update : Tue May 18 11:18:08 2010
Response via : Initial Calibration
DataAcq Meth:T150216J.M

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2	TPH	C9-C36 Aliphatics	1.400	1.501	-7.2	104	0.00
8	T	C9-Nonae	100.000	95.551	4.4	92	0.00
9	T	C10-Decane	100.000	94.524	5.5	91	0.00
10	T	C12-Dodecane	100.000	93.787	6.2	91	0.00
11	T M	C14-Tetradecane	100.000	96.055	3.9	93	0.00
12	T	C16-Hexadecane	100.000	98.521	1.5	95	0.00
13	T	C18-Octadecane	100.000	99.442	0.6	96	0.00
14	T	C19-Nonadecane	100.000	99.543	0.5	96	0.00
16	S	COD-1ChloroOctadec	-1.000	42.714	0.0	0	0.00
17	T M	C20-Eicosane	100.000	100.087	-0.1	97	0.00
18	T	C22-Docosane	100.000	99.524	0.5	96	0.00
19	T	C24-Tetracosane	100.000	98.987	1.0	96	0.00
20	T	C26-Hecxacosane	100.000	98.618	1.4	96	0.00
21	T M	C28-Octacosane	100.000	98.034	2.0	95	0.00
22	T	C30-Triacontane	100.000	97.836	2.2	95	0.02
23	T	C36-Hexatriacontane	100.000	96.960	3.0	87	0.02

Evaluate Continuing Calibration Report - Not Founds

1	TPH	Gasoline	10.000	-0.287	102.9#	0	-1.50#
3	TPH	DRO (ME) C10-C28	10.000	-0.137	101.4#	0	-3.20#
4	TPH	#2 Fuel	10.000	-0.189	101.9#	0	-1.50#
5	TPH	#6 Fuel	10.000	-0.238	102.4#	0	-1.50#
6	TPH	Motor Oil/Other	10.000	-0.525	105.3#	0	-5.50#
7		ALPHATICS COMPOUNDS	-1.000	0.000	0.0	0	0.00
15	S	OTP	-1.000	0.000	0.0	0	-7.33#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\Ma...PH15052710\EC150527.D Vial: 38
Signal(s) : FID1A.CH
Acq On : 28 May 2010 2:00 am Operator: SHM
Sample : EC150527 Inst : HP G1530A
Misc : 100ppb Aliphatic CCV Multiplr: 1.00
Integration File: events.e
Quant Time: May 28 08:47:59 2010
Quant Results File: T150216J.RES

Quant Method : C:\MSDCHEM\1\METHODS\T150216J.M
Quant Title : TPH8100 CT-ETPH ME-DRO ALIPHATICS METHOD
QLast Update : Tue May 18 11:18:08 2010
Response via : Initial Calibration
DataAcq Meth:T150216J.M

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2	TPH	C9-C36 Aliphatics	1.400	1.582	-13.0	110	0.00
8	T	C9-Nonae	100.000	92.833	7.2	90	0.00
9	T	C10-Decane	100.000	91.909	8.1	89	0.00
10	T	C12-Dodecane	100.000	90.874	9.1	88	0.00
11	T M	C14-Tetradecane	100.000	92.818	7.2	90	0.00
12	T	C16-Hexadecane	100.000	93.556	6.4	90	0.00
13	T	C18-Octadecane	100.000	94.262	5.7	91	0.00
14	T	C19-Nonadecane	100.000	94.433	5.6	91	0.00
16	S	COD-1ChloroOctadec	-1.000	40.485	0.0	0	0.00
17	T M	C20-Eicosane	100.000	94.316	5.7	91	0.00
18	T	C22-Docosane	100.000	94.374	5.6	91	0.00
19	T	C24-Tetracosane	100.000	94.298	5.7	91	0.00
20	T	C26-Hecxacosane	100.000	94.168	5.8	91	0.00
21	T M	C28-Octacosane	100.000	93.757	6.2	91	-0.02
22	T	C30-Triacontane	100.000	94.853	5.1	92	-0.03
23	T	C36-Hexatriacontane	100.000	93.837	6.2	84	-0.04

Evaluate Continuing Calibration Report - Not Founds

1	TPH	Gasoline	10.000	-0.287	102.9#	0	-1.50#
3	TPH	DRO (ME) C10-C28	10.000	-0.137	101.4#	0	-3.20#
4	TPH	#2 Fuel	10.000	-0.189	101.9#	0	-1.50#
5	TPH	#6 Fuel	10.000	-0.238	102.4#	0	-1.50#
6	TPH	Motor Oil/Other	10.000	-0.525	105.3#	0	-5.50#
7		ALPHATICS COMPOUNDS	-1.000	0.000	0.0	0	0.00
15	S	OTP	-1.000	0.000	0.0	0	-7.33#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

SB12750 CK

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- [x] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: ERM
East Hartford, CT
Telephone #:
Project Mgr. Jim Pfeifer

Invoice To: SAME
P.O. No.: RQN: MSA

Project No.: 0104024
Site Name: Wampus
Location: Milford State: CT
Sampler(s): Sean Reilly / Jim Pfeifer

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8=$NaHSO_4$ 9= 10= 11=

List preservative code below: 1 1 1

QA/QC Reporting Notes:
(check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Containers:	Analyses: CT EPH	Total Cr	Total Hex Cr
SB12750-01	WLAPE-2-Sup	5/21/10	13:20	G	SO		1					X	X
02	WLDPE-3-Sup		13:45								X	X	X
03	WLBPE-12-Sup		15:25									X	X
04	TB-15-Sup A		14:55								X	X	X
05	TB-15-Sup B		15:05								X	X	X

Analyses:
- [ ] Provide MA DEP MCP CAM Report
- [x] Provide CT DPH RCP Report

QA/QC Reporting Level
- [ ] Standard [ ] No QC
- [x] Other CT RCP/RVE

State specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp°C
Sean Reilly	Jim Pfeifer	5/24/10	17:00	3.0

- [x] EDD Format Excel Criteria / Standard
- [x] E-mail to Jim Pfeifer + Sean Reilly

- [ ] Ambient [ ] Iced [ ] Refrigerated [ ] Fridge temp ___ °C [ ] Freezer temp ___ °C